

MISSOURI

CONSERVATIONIST

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Fifty Years Ago

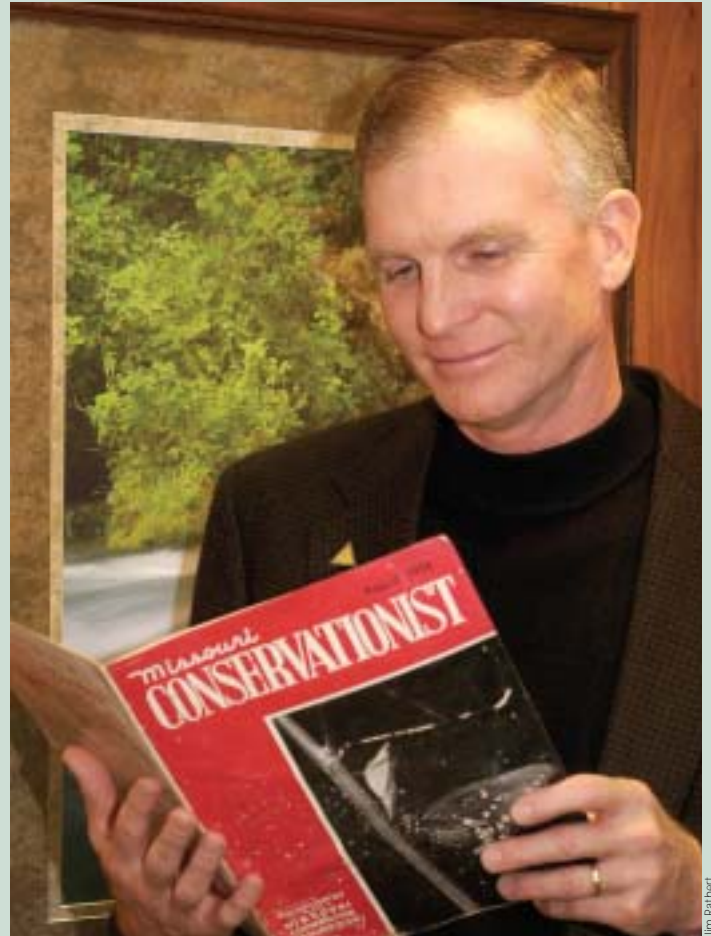
Mrs. Delmar Leather of Boonville recently sent me two *Missouri Conservationist* magazines published in 1954. I was especially interested in them because I happen to have been born in 1954! Mrs. Leather found the magazines in her late husband's papers, and she wrote of his great interest in all things related to the outdoors. She also complimented the quality of today's magazine and thanked the Conservation Department for continuing to send it to her each month. The letter touched me, but the significance of the magazines' content connected me to the past for additional reasons.

In 1954, Missouri's unique conservation department, authorized by an amendment to the state constitution in 1936, was only 18 years old. The magazine's circulation was 79,000. We now print about 487,000 per month, and we estimate that nearly 1.4 million Missourians read each issue. The *Missouri Conservationist* was, and still is, a critically important communication medium. I am very proud of the magazine staff and the many employees who do a great job of representing the Conservation Department by contributing articles and photographs.

When I examined the 1954 articles, I was struck by how similar the conservation challenges were then to those we face today. One article explained how to return food and plant cover to an Ozark farm so quail and other upland wildlife would prosper. Another article offered valuable information about the growth and life history of adult smallmouth bass. I found an interesting discussion of the legal and social conflicts among streamside landowners and the anglers and floaters of Missouri streams. Each magazine also emphasized the economic importance of wildfire control and better forestry management.

I read an article by Werner O. Nagel, a staff writer, about the importance of science to progress in conservation. He wrote that "conservation embodies all science and adds to it the directive of constructive purpose. In that sense, conservation is the conscience of science—the still, small voice that directs science to the benefit of mankind." Today, sound resource science remains critical for our management decisions and regulations. Current knowledge is not enough, so our challenge is to anticipate the knowledge needed in the decades to come.

Throughout the 1954 magazines, you could sense the Conservation Department's interest in listening to



public input and communicating with citizens on all conservation issues. Fifty years later, seeking stakeholder input through public forums, surveys and other means is still a major emphasis for Department staff.

Public support for conservation in the future is inherently dependent upon how we face resource challenges today. We must be responsive to customers, demonstrate fiscal accountability, encourage creative problem solving, demand superior public service and provide national leadership in the management of Missouri's fish, forests and wildlife.

Conservation is and always has been about clean water, healthy natural communities and a balanced, sustainable ecosystem. Mrs. Leather's historic magazines remind us that these values transcend generations.

John D. Hoskins, Director

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PRUNING MANEUVER

I read "Steel Bullets" in your December Reflections. Several years ago a hunting buddy of mine introduced me to a folding pruning saw. Now I consider it as important as my knife. I not only use it to cut both the a deer's breast and pelvic bones, but it is handy to clear small limbs out of my shooting path. It's also lighter than a hatchet and hammer.

Johnney Neely, Cosby

NO-SNIFF LIFT

Regarding your "Skunk Solution" letter, I picked up many skunks when I was hunting and trapping in the 1930s and never got sprayed.

They will spray you if you let their front feet touch anything. All you need to do is walk alongside them and grab their tail and lift them off the ground instantly.

Skunk hides were worth 25 to 50 cents for a good black hide. That was a lot of money at the time.

Harlen Stump, Lockwood

DAM WRONG

I read with great interest "A Mandate to Save the Meramec." Circa 1828, my great-great-grandparents homesteaded on the Meramec River in the Short Bend Community. They farmed and raised their family on that land and now rest among fam-

ily and friends on the land they loved.

I long for the day when I will be able to walk among the resting places of my ancestors and make my own float trip down the Meramec. Until then, I will drool over the beautiful photos in the *Conservationist*.

James A. Taff, Flagstaff, Arizona

The article about the Meramec River, the man and his children back in 1974 brought tears to my eyes. To think that we might have lost all that beauty.

I voted against the dam. I was young at the time and was torn between the promises of more places to party versus a "useless" river. Somewhere in my heart, however, the decision was made not to let this go.

I cannot express today how happy I am that a lot of others must have done the same. What I am trying to say is, thank you to JJ and her brother, Jeff, for helping with this wonderful cause.

Joyce M. Beers, Sullivan,

SMALL PAYMENT

I have been an avid reader of the *Conservationist* for many years and have never thanked the staff of the magazine. Every month there are articles that expand my knowledge of the Missouri outdoors.

I feel that I should have to pay for

such a great publication. I have lived in a number of states but have never seen a conservation magazine to top yours. Thanks again.

Robert Gavaghan, High Ridge

WARM AND FUZZY

Being an avid coon hunter, I thought the article Grandpa, Coons and Sharp was one of the best I've ever read.

Mr. Blackburn captured the joy of humans and dogs enjoying each other's company while hunting at night. I liked the warm and fuzzy feeling the article produced, as well as the pictures he painted with his words.

John Wick, Montgomery City

SKY WATCH

Thanks to Cynthia Andre and Jim Rathert for the article "Missouri's Vultures" and the accompanying photos. Very well done, indeed.

I grew up in north central Texas and spent much of my youth looking up in the sky at birds, planes, stars, etc. We had plenty of turkey buzzards. With their ability to swoop and soar with hardly any wing flapping, they often made me wish I could fly.

Near where I live in St. Joseph, a microwave tower on a bluff high above the Missouri River is attracting vultures. When the weather is decent a flock of 70 to 80 birds start collecting before sunset and roost on the tower through the night. When the weather turns nasty, they drop down into the surrounding trees for cover.

I live close enough to see the birds collecting in the fall about the time of the first hard frost for their migration south. Then look forward to seeing them return the next spring.

Dan Moore, St. Joseph



VULTURES GET CUTE

Tammy Whitlow of Greentop snapped this photo of a baby turkey vulture. She said she saw two chicks in the hayloft. One hid in the corner while she snapped photos. The other one puffed up and hissed at her, trying to scare her away.

BIRDER'S BOOK

Considering all Mr. Pete Winter, "The World's Best Birdwatcher," has done for conservation in Missouri, you might

have included ordering information for his new book.

Art Sporleder, Blue Springs

Editor's note: eminent birdwatcher Pete Winter is donating all the proceeds from the sale of his new book, "Dawn Chorus: The Adventures of a Birdwatcher" to the Winter Brothers Charitable Foundation to finance park land benefaction and conservation projects in Missouri. The book, which chronicles Winter's fascinating birdwatching expeditions, can be ordered by calling, toll-free, 800/722-5424. People in the St. Louis area can call 314/843-1400.

SHARING WORKS

I want to express my thanks to the Missouri Department of Conservation for providing venison to hungry Kansas

City families through your Share the Harvest program.

Our Mission is the recipient of venison, thanks to the work of Pastor Fred Hertwig and the congregation of Trinity Lutheran Church in Alma. Just recently, in fact, Pastor Hertwig brought us almost 1,500 pounds of ground venison in 1-pound packages that had been processed at Alma Meats.

Our food pantry has provided a week's supply of nutritious food to more than 200 poor, inner-city families each month for many years. One of our biggest challenges is obtaining enough food (especially meat). Your program has solved this problem. Now, every family can have a more nutritious diet. In fact, venison has become a very popular item among our recipients.

*Tom Eckard, Lutheran Mission
of the Good Shepherd, Kansas City*

The letters printed here reflect readers' opinions about the Conservationist and its contents. Space limitations prevent us from printing all letters, but we welcome signed comments from our readers. Letters may be edited for length and clarity.

Ask the Ombudsman



Q: How far must you be from a road to shoot?

A: There's no set distance. Here's an excerpt from Section 571.030 of the Missouri Revised Statutes: "A person commits the crime of unlawful use of weapons if he or she knowingly... Discharges or shoots a firearm at a mark, at any object, or at random, on, along or across a public highway."

This matter is also addressed in 3CSR10-7.405(3) of the Wildlife Code: No person shall take or attempt to take any wildlife from or across a public roadway with a firearm, longbow or crossbow.

As a rule, you should be off both the roadway and the right-of-way. In many cases, this is the area the state or county maintains. General wording provides the best tool for law enforcement and the courts. Responsible hunters will use good judgment in these situation and practice ethical behavior.

Ombudsman Ken Drenon will respond to your questions, suggestions or complaints concerning Conservation Department programs. Write him at P.O. Box 180, Jefferson City, MO 65102-0180, call him at 573/522-4115, ext. 3848, or e-mail him at <Ken.drenon@mdc.mo.gov>.

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A Trim and a Tuck!

St. Louis lakes are getting makeovers so they'll be more attractive to both fish and fishers.

By Kevin J. Meneau ▲ Photography by Cliff White

Remember the “Beverly Hillbillies” TV show with Jed, Granny, Ellie May, and Jethro? Remember their swimming pool, the “cee-ment pond,” in their backyard?

Many people think that all urban lakes are not much more than “cee-ment ponds”—concrete lined and devoid of fish. Thanks to lake improvement projects conducted by the Missouri Department of Conservation, however, St. Louis lakes are becoming prime fishing holes, full of habitat for fish and amenities for anglers.

St. Louis park lakes are very popular among area residents. Each year, anglers log more than 2,800 hours of fishing per acre of water



The Conservation Department manages fish populations in many lakes in St. Louis.



Just a short cast from downtown St. Louis, anglers are enjoying the newly “remodeled” Jefferson Lake in Forest Park.



The Conservation Department stocks renovated lakes with largemouth bass, bluegill and redear sunfish.

on these lakes. That's 15 times more fishing attention per acre than at Lake of the Ozarks, which is considered by many to be Missouri's busiest lake.

Some lakes offer good year-round fishing for bass, sunfish and catfish, but many do not have adequate habitat to allow fish to survive and successfully spawn. Others have poor access for disabled anglers. Lake renovations are remedying these deficiencies. Like renovating an old house to improve living conditions for people, lake renovations remodel lake habitat to improve conditions for fish and fishing for anglers.

In 1993, the Conservation Department entered into cooperative agreements with agencies in St. Louis City, Ferguson, Ballwin, Overland, Bridgeton, Kirkwood and St. Louis County to improve 27 park lakes. The Conservation Department pledged more than \$2 million to deepen and aerate lakes, stabilize lake banks, and provide disabled-angler docks, trails and parking facilities. Several renovation projects have already been completed at Carondelet, Willmore, Tilles, Spanish Lake, O'Fallon, Suson, January-Wabash, Wild Acres, Veteran's Memorial, Bellefontaine, Forest and Queeny parks.

Typical lake renovations involve several steps. First, the lakes are drained and allowed to dry. Draining and drying, which takes about three months, begins in September. Fish stocking is normally discontinued one month before draining. Emergency fish salvages allow anglers to remove most of the lake's fish prior to complete draining.

After a lake dries, Conservation Department crews deepen it with excavating equipment. Holes ranging from 8-10 feet deep are created in the middle of the lake. The deeper water helps eliminate winter and summer fish kills that currently knock down fish populations at several lakes. Away from the shoreline, the water deepens gradually, allowing plenty of shallow water habitat. Rock or brush structures are added near deep water to create fish habitat.

Aeration is added to most lakes to help prevent fish kills due to low oxygen levels and improve survival rates of stocked fish. A small, land-based compressor and several underwater lines transport air to diffusers that infuse bubbles of oxygen into the lake.

Disabled-angler fishing platforms or docks, with accompanying trails and parking, are being constructed at each lake. These concrete platforms or floating docks extend into the lake, making it easier for anglers who are disabled to fish deep water. The parking areas and connecting trails allow for easy access.

If everything goes according to schedule, a lake renovation can be completed within six months. The lakes are then refilled and restocked with fish.

After a lake improvement project, the Conservation Department usually stocks the lake with largemouth bass, bluegill and redear sunfish. These fish should be able to establish naturally reproducing populations and



Fish habitat was added to Jefferson Lake before it refilled. Compare this picture with the photo of the lake on page 5.

provide good fishing without additional stocking. As part of the Urban Fishing Program, some lakes receive supplemental stockings of carp or channel catfish twice a month from April through October. Rainbow trout are stocked at selected lakes during the winter.

Although a lake renovation temporarily inconveniences anglers, there are usually enough nearby fishing opportunities in the St. Louis area where anglers can wet a line. More information on St. Louis fishing lakes can be obtained by calling the Missouri Department of Conservation (636/441-4554) and asking for the "Fish St. Louis" brochure or visit www.mdc.missouri.gov/areas/stlouis/fish/ on the web.

Ultimately, the renovation of St. Louis lakes will provide much better fishing, improved disabled-angler access and, in many cases, more species of fish to catch. That's more than you would ever find at Uncle Jed's "cee-ment pond." ▲



Renovation projects are making St. Louis lakes more accessible, more enjoyable and more productive.



Urban Canada Geese in Missouri



Jim Rathert

The phone was ringing when I got to my desk this morning. "Good morning, Missouri Department of Conservation," I said into the receiver. "Can I help you?" "Yes!" replied an excited voice. "We have a huge goose at our back door that will not allow the children to go outside to the playground for recess."

The phone rings again. "Help! A Canada goose is keeping customers from coming into our store. They can't even get out of their cars."

The next caller reported gobs of goose droppings all over their golf course. "We can't walk without stepping in it," the caller said.

Conservation offices get plenty of phone calls about conflicts with urban Canada geese. The big birds have become so common that they are regarded as nuisances in some quarters. Yet, not very long ago it was rare to see a Canada goose on a neighborhood pond.

Giant Canada geese, one of five goose species in Missouri, were nearly wiped out by market hunting. The species also suffered greatly from the destruction of wetland habitat. By the early 1930s, they were thought to be extinct. However, it appears that the cliffs along the lower Missouri River were continuously populated by small numbers of nesting giant Canada geese.

Growing numbers of giant Canada geese are creating giant problems in urban areas.

by Wendy Sangster and Tom Meister

In 1949, attempts began in Missouri to restore the species to its native range and to provide public viewing and hunting opportunities. Specifically, the goal of this effort was to restore nesting Canada geese to at least 75 of the 114 counties in Missouri. This goal was exceeded by 1991. By 1999 the population was 42 percent above targeted numbers.

Conservative estimates reveal that the giant Canada goose population in the Mississippi Flyway has grown from about 800,000 in 1993 to 1.5 million in 2002. Estimates for the same 10-year period in Missouri show a population increase from about 30,000 to 64,000. Missouri's highest densities of geese are in urban areas.

Managing giant Canada geese in Missouri is compli-



Photos by Cliff White

Banding surveys show that many giant Canada geese remain year-round in Missouri. Four other geese species migrate through the state.



Roundups and removal of excess geese take place only after all other solutions have failed.

Giant Canada geese have many advantages over members of the other populations. Their longevity, consistent productivity, high survival and affinity for urban landscapes all contribute to sustained population growth.

cated by the fact that four other populations of geese are also present in the state at various times. The Tall-grass Prairie, Mississippi Valley and Eastern Prairie populations migrate through Missouri at certain times of the year, but they nest elsewhere.

On the other hand, thousands of giant Canada geese nest in Missouri and are in the state year-round. Because survival, reproduction and harvest rates are different for each of these populations, the status and dynamics of all goose populations present in Missouri must be considered when managing any one of them.

For example, giant Canada geese have many advantages over members of the other populations. Their longevity, consistent productivity, high survival and affinity for urban landscapes all contribute to sustained population growth. Meanwhile, other populations face obstacles such as short breeding seasons in unpredictable climates. The statewide goose harvest in Missouri reflects these differences, with the proportion of giant Canada geese steadily increasing over the past 30 years.

In the past, the Missouri Canada goose harvest was driven primarily by the availability of northern nesting migrant populations. Currently, giant Canada geese account for about three-fourths of the total goose harvest.

The recovery of the giant Canada goose has been so successful that many now view the birds as a nuisance. This is especially true in urban areas, where geese are blamed for creating airport and traffic hazards, digging into corporate and residential lawns, and damaging pond banks and stream banks. Where they are numerous, geese leave excessive droppings that foul areas and contribute to water pollution. During their nesting season, geese may also attack people.

Over the last eight years, the Conservation Department has implemented an integrated approach to managing Canada geese in Missouri. This effort began in 1996 when we formed an Urban Goose Task Force. The mission of this group is to organize a communication and coordination system for urban goose issues, to identify alternative measures for controlling urban



Jim Rathert

The aim of urban goose management is to reduce their numbers before geese become a nuisance.

“Living with Canada Geese” workshops

Missourians can learn how to avoid and reduce conflicts with giant Canada geese at workshops in the St. Louis area in February.

In cooperation with the Missouri Department of Conservation, GeesePeace of St. Louis, a non-profit group that promotes non-lethal solutions to nuisance goose problems, is offering six workshops in 2004.

Participants will learn population stabilization techniques. The workshops also include information about the use of landscaping, trained dogs, chemical repellents and no-feeding policies as part of an integrated goose management plan.

The workshops will be in Ballwin at the Wildlife Rescue Center (Feb. 4, 11 and 29), St. Louis City at the Humane Society (Feb. 18), Florissant at Florissant Valley Country Club (Feb. 22), and Kirkwood at the Powder Valley Conservation Nature Center (Feb. 26).

For more information about the workshops, write GeesePeace of St. Louis, P.O. Box 38846, St. Louis, 63138, call 314/567-2081 or email <info@geesepeacestlouis.org>. The group has a website at <www.geesepeacestlouis.org>.



goose flocks, and then to recommend a process for implementing the program. At the same time, the group wants to maintain the public's appreciation for native wildlife.

In addition to making general recommendations, the Urban Goose Task Force also provides detailed outlines on how to promote public awareness of urban goose issues and how to involve citizens in resolving urban goose issues. The group also established a protocol for responding to goose problems in urban Missouri.

In 1998, the Nuisance Urban Goose Implementation Team (NUGIT) was formed to implement the recommendations of the task force. Because hunting is usually not allowed in urban areas where geese often overpopulate, NUGIT requested authorization from the U.S. Fish and Wildlife

Service (USFWS) to streamline the permitting process for Missouri residents to use egg oiling and roundup and removal to control giant Canada geese numbers. The state received this authorization in the summer of 2000.

Missouri has been successful in dealing with Canada geese because various groups have come together to tackle the problems.

Before exercising the authority provided by the USFWS permit, NUGIT conducted training sessions throughout the state. These sessions informed staff about Conservation Department guidelines for urban Canada goose management and the new permit process. NUGIT also initiated print articles, press releases, radio and television releases and two new publications on how to deal with urban goose conflicts in Missouri.

Probably the most important part of the approach taken by Missouri is its insistence on using multiple methods before resorting to the more extreme measure of roundup and removal. Roundup and removal are effective only after a large number of geese are already established in an area. This happens quickly without harassment, alteration of the habitat or other control measures. Because they are required to use other methods before receiving a permit for roundup and removal,



Jim Rathert

Rebounding goose populations are a blessing that needs to be kept in check.

communities are compelled to try techniques that often make roundup and removal unnecessary.

Cooperation among agencies, communities, and interest groups is critical to goose management. Missouri has been successful in dealing with Canada geese because various groups have come together to tackle the problems.

For example, the expansion of egg and nest destruction in Missouri was facilitated by cooperation among the Conservation Department, the U.S. Department of Agriculture, GeesePeace, nuisance wildlife control operators and property owners. No two situations are the same, and no single method will resolve all goose/human conflicts. However, it's a good sign for goose management, and for conservation in general, that people who don't always agree were able to come together and seek a positive solution. ▲

Infocentral

Visit your local Conservation Department office for additional information on urban geese management, or visit our website at www.missouriconservation.org.

A new publication, "Controlling Conflicts with Urban Canada Geese in Missouri," describes common strategies for solving goose problems, lists suppliers of control products, and provides a template for developing a tailored management plan. For a free copy, write to Publications, P.O. Box 180, Jefferson City, MO 65102-0180, or email publications.staff@mdc.mo.gov.

Habitat Management Behind an ATV



A boom sprayer on an ATV allows you to apply liquid fertilizer or herbicide.

Properly accessorized, your 4-wheeler can be as useful as a tractor.

by Phil Rockers
photography by Cliff White

Missouri's landscape is changing. In the last 10 years, land ownerships have become smaller, and the number of landowners has increased. This is due to a desire by many families to move away from the stress of urban life, purchase land and a home in the "country," and raise their families in a more rural, relaxed setting.

In some cases, people just want recreational land, a place where their families can enjoy hunting and fishing, hiking or photographing and watching wildlife. Recreational landowners usually aren't very interested in raising and selling crops or livestock. However, recreational landowners often want to do whatever they can to attract and produce more wildlife.

Landowners often believe they need an expensive tractor and implements to improve wildlife habitat on their property. That's not always the case. They can also take advantage of the all terrain vehicles (ATVs) they use for hunting and fishing or other recreational activities. Properly equipped, an ATV allows landowners to manage habitat on their land in ways similar to their neighbors who have tractors, discs, cultivators, planters and other farm equipment.

Many new kinds of equipment are made especially for use behind an ATV. These implements can do the same jobs as those pulled by a tractor, except on a smaller scale. In fact, the ATV is much more versatile than a tractor

because it can maneuver in smaller, isolated pockets that may be the best locations to manage for wildlife.

The kinds of habitat management an ATV owner can perform include:

- ♦ Controlling undesirable vegetation with herbicides.
- ♦ Plowing, discing, cultivating, harrowing, planting and fertilizing food plots.
- ♦ Mowing and discing firebreaks for conducting prescribed burns.
- ♦ Controlling prescribed burns using a water unit pulled behind an ATV.



Disked firebreaks and a pull-along water unit help you control prescribed burns.

- ◆ Planting warm-season and cool-season grasses, legumes and wildflowers.
- ◆ Mowing between rows of newly planted trees and shrubs for maintenance.
- ◆ Light disking to improve brood-rearing habitat for quail and turkey.
- ◆ Overseeding legumes and forbs in warm and/or cool-season grass stands or on glades and other areas.

Controlling burns

When conducting a prescribed burn, you should first prepare a proper firebreak or fireline around the area to be burned.

A Plotmaster or a flip-over disc works great to disc in the line. If the grass around the perimeter of the burn area is too tall and thick to pull a disc through, you can use the ATV bushhog. The ATV bushhog cuts the grass short and allows the Plotmaster's disc and cultivator or flip-over disc to break up the ground thoroughly to create a nice "disced firebreak" that will help contain the fire.

Having a pull-behind water unit, along with drip torches, flappers, rakes, backpack sprayers and leaf blowers can make conducting prescribed burns easier and safer.

Light Discing

Creating bare strips of ground through grasslands near nesting habitat is beneficial to a variety of wildlife. Use a Plotmaster or a flip-over disc to lightly disc or disturb sites to create more variety in plant species and habitat. Beneficial annual plants will grow in areas opened by light discing.

Also, the bare ground between plants serves as high-quality brood-rearing habitat for young quail chicks and turkey poults. The open area provides a place for the chicks to dry off from heavy dews. It also makes it much easier for them to find insects and seeds. Quality brood-rearing habitat is crucial for chick survival soon after hatching.

Firebreak Construction

As mentioned above, the bushhog can be used to help create a firebreak. It can be used by itself or in combination with the flip-over disc to create a firebreak. By mowing the firebreak several months in advance, the "line" will green up nicely. This green-grass area will reduce the chances of the fire moving through the firebreak, which could result in a fire burning out of



Lightly disking strips through grass fields encourages the growth of plants beneficial to wildlife and creates brood-rearing habitat.

control. The flip-over disc or Plotmaster can be used to create a bare soil line on the inside of the green line, making for a much safer firebreak.

Tree and Shrub Planting Maintenance

For the first three years, mowing is crucial until planted trees and shrubs are well established and don't have to compete with taller weeds for sunlight. The ATV bushhog is ideal for this task

When riding on an ATV, you are closer to the trees and can see them more easily, which decreases the chance of mowing over them. The ATV bushhog gives you the ability to mow closer than a tractor to the trees and shrubs. This reduces weed competition and increases the likelihood of the stand's success.

Controlling Vegetation

When converting vegetation to a wildlife-friendly, warm-season or cool-season grass stand, your success depends on how well you prepare the site to be planted. A boom sprayer that attaches to the back rack on an ATV will help you kill all unwanted plants. Although small, the boom sprayer works great when creating 30- to 50-foot warm-season and cool-season grass buffers around fields.

Planting Foodplots

The design of the flip-over disc and harrow makes this piece of equipment easy to pull between sites. Flip it over on the disc side and start working the ground. After the seed bed has been prepared and the seed has been broadcast, the harrow can be used to work in the seed.

The Plotmaster also can be used to disc, cultivate, seed and cultipack your foodplot.

Broadcasting or Overseeding

Overseeding an existing stand of cool-season grass with legumes, such as clovers and annual lespedeza, to improve species diversity can be easily accomplished with an ATV-mounted broadcaster. The broadcaster is ideal for overseeding forbs (wildflowers) in native warm-season grass stands. You can also use it to broadcast food plot seed.

Planting Warm-season Grass

Because of its light, fluffy seeds, native warm-season grass cannot be spread with a regular broadcaster. Usually the only solution is to use a no-till, warm-season grass drill that needs a 40-horsepower tractor or larger to pull it. However, an ATV's warm-season grass broadcaster makes it possible to establish a stand of warm-season grass. The broadcaster has a "picker" wheel in the hopper that pulls the seed through to the broadcast plate for easier spreading. The flip-over disc or Plotmaster should be used before broadcasting to prepare a good seed bed. The cultipacker on the Plotmaster or the harrow can then be used to work the seed into the soil. Although much smaller than a no-till drill, the broadcaster works great for establishing warm-season borders along field edges.

The ATV equipment discussed in the article can be purchased from implement dealers or other businesses in your area, or from some outdoor specialty catalogs. Also, some of the equipment can be rented from the Missouri Department of Conservation.

By using your ATV like a tractor, you can perform habitat management efficiently and effectively. And, unlike a tractor, your ATV can also be used for hunting on your property. Try taking your tractor down a narrow path to haul out the nice buck you harvested over your new foodplot—the foodplot you established with your ATV! ▲



Mow in advance of a prescribed burn to create green firebreaks. ATV mowers can easily avoid planted trees and shrubs.



Missouri's **BIG** Game **FISH**

Trotlining for
catfish is
part fishing,
part wrestling.

By David Urich
photography by Cliff White



Trotlines set on the Missouri River and big
reservoirs often yield bruiser blue catfish (left)
or feisty flatheads (above).

The cold pierced our bones. Rain came down in buckets, filling the bottom of the boat with water despite the bilge pump and our attempts at bailing. When the lightning raced across the sky, we caught a glimpse of the shoreline. I knew it was dangerous to be in an aluminum boat on the water with lightning flashing, but we couldn't find our campsite.

Four hours earlier, my partner and I had baited, with live carp, eight trotlines in wooded coves on the upper end of Truman Lake. Every May, we camp at the U.S. Army Corps of Engineers Sparrowfoot Campground south of Clinton and fish for flathead catfish. This time we decided to stay on the water after dark to check the lines and re-bait with goldfish. The vicious storm caught us completely unaware.

Now we were both soaked and hopelessly lost at night on the lake. Our 2-million candlepower spotlight was useless because of the way the rain diffused the light. Except when the lightning flashed, we couldn't even see the front



Strong lines are required because a hooked catfish will roll, twisting the line until it can pull itself free.



Big barrel swivels solve the line twist problem. You can attach stage lines to them using a simple loop.

of the boat. For four hours we blundered around in the dark and rain before we finally made it back to camp.

At 3:45 a.m., I crawled into my wet tent, shivering from the cold and thankful to be out of the rain and lightning. But as I went to sleep, I had a good feeling. The rain would make the reservoir rise, and years of fishing for big flathead catfish had taught me that rising water would bring the flatheads out to feed.

Sure enough, the next morning we caught a 62-pound flathead and several more in the 30- to 50-pound class.

RESERVOIR TROT LINES

Trotline fishing is the most dependable and probably the easiest way to catch big catfish out of our reservoirs and rivers. It's a lot of fun, too. I usually set my trotlines in about 10 feet of water and try to keep the lines 3 feet off of the bottom. I run the lines between trees. For my main line, I use #60, 580-pound test, nylon braid. Flatheads are found in submerged brush or old flooded trees, and you need line that won't break easily.

If the hooks snag on the brush, I can wrap the line around a canoe paddle, brace the paddle on the inside of the boat and pull the hooks free using the boat motor. The line never breaks.

The hooks are large, usually 9/0 steel shank. I space them at 6-foot intervals on 18-inch drop lines made with #36, 280-pound test, nylon braid. I use a double figure-8 knot at each point on the main line for the staging. Each of these is attached to an 8/0 or larger brass barrel swivel.

The swivel is important because big catfish tend to spin and roll on the line. The large barrel swivel makes it simple to attach a pre-made stage line and hook with a simple loop rather than a knot. This makes it easy to remove the stage lines.

Each trotline has about six to eight stages with hooks. The main lines are weighted in the center, with the weight just touching the bottom of the lake. Old window sashes make perfect weights. I also use the weights from a barbell set that my kids used when they played high school football.

The two most important aspects of trotline fishing for big flatheads are setting the lines in the best habitat and tying knots that will hold a big fish. I was a Boy Scout leader in Moniteau County for 10 years. Each year I took the Scouts on an overnight float trip on the Lamine River, putting in at the Highway 50 access. I took live bait, usually goldfish or green sunfish, in a cooler with a battery powered aerator. We camped on a gravel bar and then tied up new trotlines.

Each Scout had to learn three knots. We used two half-hitches with a loop in the second hitch to tie the line to a



Set river trotlines downstream from wing dikes or underwater cover. Add a 10- to 20-pound weight to keep them taut.

tree stump, rock or some other sturdy object. The loop is important because it is easy to undo, especially in a heavy wind or other adverse conditions that seem to pop up whenever it's time to take the lines out of the water.

We used a square knot to join two lines of equal size together. It is easy to tie in a hurry as you set the lines. Trees and other suitable anchors never seem to space themselves at the perfect interval for a prefabricated trotline.

Finally, they learned the palomar knot for tying the hook to the stage line. Scout leaders are supposed to intuitively know how to tie knots. This is false. I learned knots by typing the keywords "fishing knots" into an Internet search engine. There are many good web sites with excellent diagrams for tying the knots I routinely use, plus hundreds more. There are even animated computer programs showing how to tie knots in

slow motion. These are so foolproof that even Scout leaders can become experts overnight.

After the Scouts made several trotlines, we loaded into the canoes and searched for good places to set the lines. I taught the Scouts to look for trees and old logs that produce deep scour holes in the river channel. We checked the bottom structure with canoe paddles, searching for

locations in the slow water pools with brush and other places for fish to hide. We tried to set the lines to cross a variety of depths while staying close to submerged cover.

We never failed to catch fish on these outings. The first year we caught a 45-pound flathead. The boys couldn't believe that such big fish existed in Missouri rivers. The problem was how to get such a big fish off the line without tipping the canoe.

After gathering the Scouts on the bank to discuss options, I appointed

Trotline fishing is the most dependable and probably the easiest way to catch big catfish out of our reservoirs and rivers. It's a lot of fun, too.



The best way to handle a big catfish is to put a gloved hand into its mouth.

two “volunteers” to help me in the canoe. They raised the line slowly from both ends of the canoe. As the big fish came to the surface, I gently placed my hand, protected by a leather glove, into its mouth. Flatheads have very fine teeth that are pointed backwards. Their bony jaw is easy to grip, and the fish instinctively closed its mouth.

I was surprised at how calmly the fish accepted my hand. Then, everyone in the canoe leaned to the right and I pulled the fish over the left side of the canoe. It was a miracle that the canoe did not flip. Ever since that experience, I routinely wear a leather glove to remove big catfish from the trotlines.

Next, we hung the fish from a tree, and I showed the scouts how to remove the skin by making a shallow cut around the base of the fish’s head and down the back to the tail. We removed

the skin by pulling on it with pliers. Special skin strippers are also available for this job. We then removed two big fillets from the back, and one from the underside of the fish.

All of this activity delayed our arrival at our takeout point by more than two hours. Needless to say, there were some impatient and concerned parents waiting to pick us up, but their moods lightened when we parceled out the fish fillets. None of the parents knew how to process the meat, so I demonstrated how to remove the red portion, leaving just white meat.



Tangles complicate trotline fishing. Strive to keep the lines organized.

RIVER RIGGING

In recent years, I have turned my attention to setting trotlines on the Missouri River. The best time to fish for flatheads on the Missouri River is mid-April through May. Fishing success during the summer is not as predictable.

On the Missouri River, I set my lines on the downriver side of wing dikes. These rock structures extend from the bank into the river and divert the current away from the bank. Often the wing dikes have a notch that allows current to flow through. The notch usually has a deep plunge pool on the down river side.

I tie the trotline onto a big rock at the edge of the notch. I then set the line parallel to the flow of the current through the notch and drop the other end of the line with a 10- to 20-pound weight on the river bottom.

Typically, my line has five to six hooks spaced at 6-foot intervals. Baiting with live fish seems to work best, although I have caught flatheads on beef liver, cut shad, chicken hearts and smoked sausages. I was going to eat those sausages for lunch, but I used them when I ran out of other bait.

Two years ago, I asked the former Director of the Department of Conservation, Jerry Conley, to help me check my Missouri River trotlines. We caught a 32-pound flathead.

As we were cleaning the fish, Director Conley, who started his conservation career as a fisheries biologist, opened the fish's stomach. I was surprised to see five of my bait fish inside. I routinely hooked the bait fish near the tail because somebody had once told me to do that. It was apparent that this flathead had moved down my line and pulled the fish off the line head-first. Now, I hook bait fish under the dorsal fin so the catfish will have the bait fish and the hook in the mouth at the same time.

When my new friend and instructor was done with his advice, he reached into a big tub, gave me a 30-pound flathead and told me to pass on what I had learned.

Learning how to fish for big catfish has taken me years of experimenting and talking with other fishermen. Last year I met a flathead fisherman on the Missouri River who had years of experience. We had never met before, so I was surprised to learn that he lived less than two miles from my house in rural Moniteau County.

We swapped stories, and then he offered to inspect my lines and gear. His best suggestion was to abandon the J-shaped hooks I had been using and switch to a hook with the tip pointed back to the shank. These hooks are more difficult to bait, but they prevent twisting and rolling catfish from pulling the hooks out of their mouths.

He also showed me how to attach my stage lines and hooks to the main line using a key ring. This allowed me to space the hooks at whatever intervals I wanted to take advantage of the best underwater cover and habitat conditions. When my new friend and instructor was done with his advice, he reached into a big tub, gave me a 30-pound flathead and told me to pass on what I had learned.

I usually try to camp overnight on a Missouri River sandbar when I am fishing for big flatheads. After dark, I have the river to myself. Pole and line fishing for channel catfish on the down river ends of sandbars can be excellent at night. Each time I camp on the Missouri River, I am awed at how isolated, wild and quiet it is only 10 miles from my house. The wilderness atmosphere of the Missouri River is grand, and there is always the chance of pulling up a flathead catfish, Missouri's big game fish. ▲



Many catfish anglers are switching from J-shaped hooks to circle hooks, which lodge in the corner of the fish's mouth.



Hooking baitfish under the dorsal fin results in less bait stealing and more catches than hooking them in the tail.

Save the Last Dance



*Prairie chickens compete for mates, and for survival,
on the state's few remaining booming grounds.*

By Kathy Love ▲ Photography by Jim Rathert





Ancient booming grounds continue to attract prairie chickens, but the eccentric birds are running out of habitat.

Night's curtain is rising. The stage before us is dark, but light begins to creep in. A black shape enters from the sky, and the ballet begins.

We are sitting in a blind near the same prairie chicken booming ground that a young biologist named Charles Schwartz wrote about in 1944.

Before long, 16 male birds are making low cooing sounds, called "booming," that carry across the valley. Schwartz said their booming can easily be heard a mile away. Soon the males are joined by two hens, and the booms are interspersed with clucks and cackles.

The sounds are music to the ears of Betty Grace, who has led a small group of visitors to view the prairie chickens' mating ritual. For six weeks since early March, she's made daily, pre-dawn forays to the booming grounds, and the birds have never failed to show. But some hens are already nesting, and the mating activity will soon end.

Only about 500 prairie chickens remain in Missouri, down from the 13,000 Schwartz estimated in 1944, and way down from the tens of thousands encountered during their peak in the 1860s, when they were found in every

county that had prairie lands, even those in the Ozarks.

Prairie chickens proved irresistible to market hunters, who netted or shot them and packed them into barrels to sell in the cities. In 1907, with only 12,500 birds remaining in the state, fish and game officials stopped the hunting of prairie chickens.

The booming ground we're visiting is on Dunn Ranch, owned by The Nature Conservancy. It is 3,000 acres of what had once been prairie, and it is slowly being restored. The birds that use it are not descended from the birds viewed by Schwartz in the 1940s, however. Those birds disappeared. The birds we're watching are from two reintroduced populations—one from southern Iowa and one 30 miles south of Dunn Ranch. One of the hens was banded in Sullivan County, 56 miles away. The mechanism that draws modern prairie chickens to the exact same booming ground noted by Schwartz is unknown.

Looking for sky

Schwartz wrote, "The future of the prairie chicken in Missouri is in the hands of all the people of the state, but it depends most of all upon those who use the soil." He also noted, "Prairie chickens don't look for land, they look for sky." He meant that prairie chickens need open land from horizon to horizon, unbroken by trees where predators may

lurk. They also need diverse grassland with vegetation of different heights and various amounts of residual material on the ground for nesting and travel lanes.

According to Larry Mechlin, a biologist with the Conservation Department who specializes in prairie chickens, the first half of the 20th century was relatively beneficial for the species. Soon after Schwartz did his study, however, populations in north Missouri plummeted dramatically.

“World War II ended, soldiers returned and put more land into production,” Mechlin said. “Within five years, the north Missouri prairie chickens were gone.”

Missouri, Iowa and Illinois had once been the heart of prairie chicken populations. Now sizable populations are found only in Nebraska, Oklahoma and Kansas. A subspecies found in Texas, the Attwater’s prairie chicken, is likely the rarest bird in the world.

Prairie chickens can readily survive in an agricultural environment, Mechlin said. A mosaic of grazing land and grain crops actually benefits the birds. However, that kind of habitat is disappearing fast. For example, nearly 1 million acres of Missouri’s landscape have been converted to forest in the past decade. Old, unmanaged fields grew up in cedars. Some lands were intentionally converted to trees.

Fescue also took a toll. Its dense undergrowth chokes travel lanes and discourages abundant and diverse insect life. Prairie chickens depend on insects for protein.

“The problem doesn’t just affect prairie chickens,” Mechlin said. “All grassland species are affected. Meadowlarks have suffered a 45 percent decline. Upland sandpipers are also at risk.”

Improving the habitat

Sharron Gough has spent 15 years managing prairies to improve habitat for prairie chickens and other prairie-dependent species for the Conservation Department. She works with the Grasslands Coalition, a consortium of public and private landowners, foundations and government agencies that work together to expand prairie habitat.

The coalition is experimenting with a variety of management techniques to encourage prairie chicken survival. Removing trees and creating predator exclusion fences have proven effective.

A promising new technique, called patch burning, encourages the maintenance of good prairie chicken habitat on private pastures.



In patch burning, a third of a pasture is burned each year. Cattle, attracted to the fresh growth of grasses, concentrate in the newly burned sections. This allows the grass in the other sections to grow in tall clumps. Prairie chickens nest in the grass clumps. In fact, if grass clumps are not available, prairie chickens will not or cannot make do with other types of vegetation.

The new technique allows landowners to provide habitat for prairie chickens while continuing to graze their fields. There’s no sacrifice in yield, either. Cattle grown in patch-burned pastures gain as much weight as those grown in fields that aren’t burned.

The Conservation Department has acquired several prairies to provide needed habitat for declining species like meadowlarks and prairie chickens. These include Taberville, Bushwacker, Niawathe and Hi Lonesome conservation areas. Prairie chicken survival, however, primarily depends on private landowners.

Kind of a Treasure

Jay Albertson awoke many a morning in the 1920s to the booming of prairie chickens on his north Missouri farm. He said the birds were a common part of the landscape until the mid 1940s, when they declined considerably. By the 1950s, the prairie chickens were gone.

In 1993, however, the Conservation Department began a restocking program to bring prairie chickens back to north Missouri. They released 50 birds in the high, treeless landscape near Mystic. The next day, some prairie chickens showed up on the farms of Albertson and his neighbor, Bill Swisher.

About 20 birds remain on the Swisher farm, but Albertson’s population has dwindled to just three males—no females. In 1999, Albertson had high quality video footage made of the booming prairie chickens. Now that his birds may be gone, he says the tape is “kind of a treasure.”

"We have a lot to learn from private landowners," said Gough. "They're in a position to observe the birds day in and day out. This gives them a perspective we lack, so we listen carefully to what they're saying."

Communities cash in

A Conservation Department wildlife biologist helped organize the prairie chicken viewing opportunity at the Dunn Ranch. In 2002, the prairie chickens attracted 140 viewers and 146 viewers in 2003. A visitor survey revealed that more people came from 100 miles away to view the prairie chickens than from 20 miles away. In fact, people traveled from as far away as Arizona and New Mexico for the chance to see the mating dance of prairie chickens.

"We even had a gentleman from Russia," Grace said. "He was on the faculty at Maryville. He said when he was growing up, he had very few books, but one he was fond of was on North American birds. It contained a picture of the prairie chicken, and that's what drew him here."

Nearby towns of Bethany and Eagleville have benefited from the travelers, who spend money on food, gas and lodging. Prairie chicken key rings and t-shirts have yet to appear in souvenir stores, but that day can't be far off.



Prairie chicken restoration will require the assistance of private landowners.

Prairie chicken viewing opportunities

Few places in the state offer good opportunities to view prairie chickens. Prairie State Park in Barton County often boasts healthy numbers of birds. Check on their availability for viewing by calling 417/843-6711.

The Dunn Ranch viewing excursions are limited to 10 people each day from mid-March through April. Visitors must arrive well before dawn to be in the blind before the chickens arrive. Reservations are required. For more information, call 816/271-3100.

To learn more about managing your land for prairie chickens, subscribe to a free newsletter with informative articles geared to landowners. To subscribe, call 417/876-5266 or email sharron.gough@mdc.mo.gov.

A ritual dance

On the morning we visited the birds, a brisk north wind circulated through the blind. We were each seated in front of a window. Binoculars and a scope were provided. We spoke in whispers to avoid startling the wild dancers.

One by one the birds arrived, strutting and booming as close as 30 feet in front of us. Schwartz said the number of males on a booming ground can vary, but the average is about 12. Some booming grounds, he noted, had been used for 40 years before the birds' precipitous decline.

Males "boom" from their syrinx, or voice box. The call attracts females and intimidates other males. There is much sparring between males, which face off with their

tails up and bright orange air sacs inflated. They peck and parry, sometimes springing straight in the air as they attempt to slash one another with their spurs. Schwartz said this sparring sometimes results in broken feathers or gashed air sacs, but the males we witnessed seemed more intent on performance than violence.

Generally, one dominant male will breed with the females, almost always on the same place on the booming ground. Other males vie for the hens' attention but are seldom successful. When a young upstart male tried crashing the hen party, the other males quickly put him to flight. Biologists speculate that some birds serve as sentries to alert the flock to danger.

The 18 birds before us performed their mating dance, oblivious to their audience. Without a helping hand, their performance may end. ▲



2004 Wildlife Code Changes

Compiled by John W. Smith

Each year, the Regulations Committee for the Missouri Department of Conservation reviews all the rules in the Wildlife Code of Missouri.

The purpose of the annual review is to determine whether the existing regulations continue to fulfill the mission of conserving the state's forest, fish and wildlife resources without unnecessarily regimenting or inconveniencing the public. When specific needs are identified, rule changes are recommended to the Missouri Conservation Commission for approval.

Rule changes that appear in the 2004 Wildlife Code, which is now available, become effective March 1, 2004 and are highlighted in this summary. Hunters, anglers and trappers are responsible for understanding the regulations before venturing afield.

HUNTING AND FISHING PERMITS

New fees for resident hunting permits:

- Resident Small Game Hunting Permit – \$10
- Resident Spring Turkey Hunting Permit – \$17
- Resident Fall Turkey Hunting Permit – \$13
- Youth Deer and Turkey Hunting Permit – \$17
- Resident Fishing Permit – \$12
- Daily Fishing Permit – \$5.50 per day
- Daily Small Game Hunting Permit – \$11 per day

YOUTH DEER AND TURKEY HUNTING

Any person ages 6 through 15 years old may purchase a Youth Deer & Turkey Hunting Permit without displaying a hunter education certificate card. Under this provision, a youth possessing this permit will be allowed to hunt in the immediate presence of a properly licensed adult who has a valid hunter education certificate card, or in the presence of a resident landowner, who may or may not have a hunter education certification card, on lands owned by the resident landowner, provided the resident landowner was born before Jan. 1, 1967. Previously, any adult accompanying a youth hunter during the youth deer and turkey season was required to possess a valid hunter education certificate card.

HUNTING FERAL HOGS

Feral hogs (any hog, including Russian and European wild boar, that is not conspicuously identified by ear tags or other forms of identification and is roaming freely upon public or private lands without the landowner's permission), may be taken in any number by any method without permit throughout most of the year. However, during all portions of the fall firearms deer and turkey hunting seasons, bait may not be used 10 days prior to or during the seasons, and hunters must



possess a valid, unfilled firearms deer, turkey, or small game hunting permit and must abide by the methods of pursuit allowed for deer and turkey. During the November portion statewide and the antlerless-only portion in open units, dogs may not be used, and deer permittees may only use methods allowed for deer, and small game permittees may only use a shotgun with shot not larger than No. 4. During the youth-only and muzzleloader portions statewide and the Urban portion in open units, deer permittees may only use methods allowed for deer, and small game permittees may only use methods allowed for small game. Other restrictions may apply on public lands. Resident landowners or lessees as defined in the Wildlife Code may take feral hogs on their own property at any time, by any method and without permit.



EXPANDED SQUIRREL SEASON

Squirrels may be taken from the fourth Saturday in May through Feb. 15. Previously, squirrel season ended on Jan. 15.

USE OF LIGHTS

Wildlife, except for raccoons or other furbearing animals when treed with the aid of dogs, may not be searched for, spotlighted, located, harassed or disturbed in any manner with the aid of an artificial light, headlight or spotlight from any roadway, whether public or private, or in any field, woodland or forest, by any person acting singly or as one of a group of persons.

HOUND RUNNING

Any person releasing dogs on a hound running area shall have in his/her possession a valid Small Game Hunting Permit. The old Hound Running Area User Permit has been discontinued.

DOG TRAINING

Dog training areas shall be a single tract of land not more than 40 acres in size. Formerly, dog training areas could be a single tract of land not larger than 20 acres.

TAXIDERMMY

Legally taken and possessed furbearers may be purchased by licensed taxidermists or tanners only for mounting or tanning, and only mounted or tanned specimens may be sold.

TRAPPING

NEW! Resident Cable Restraint Permit. Furbearers may be taken by trapping through the use of cable restraint devices from Dec. 15 through Feb. 15, by holders of a Cable Restraint Permit (\$25). Before obtaining the permit, applicants must possess a valid Trapping Permit and complete a cable restraint training course, conducted by a certified instructor. A full definition of a cable restraint device can be found in the Wildlife Code.

Otter Management. Except in Otter Management Zone E, killer or Conibear-type traps with a jaw spread less than 8 inches and foothold traps with an inside width at the jaw post less than 6 inches are prohibited in water sets after Feb. 15. The area covered by Otter Zone E was expanded in 2003.

Extended furbearer season. Seasons for badger, bobcat, coyote, gray fox, red fox, mink, opossum, raccoon, striped skunk is from Nov. 15, 2004 through Feb. 15, 2005. Beavers may be trapped from Nov. 15, 2004, through March 31, 2005.

FISHING

Expanded reciprocal fishing privileges with Kentucky

Any person possessing a valid sport fishing license issued by

the state of Kentucky, or who is legally exempted from those license requirements, without further permit or license, may fish in the Mississippi River within the boundary of Missouri adjacent to the state of Kentucky. For the purposes of these reciprocal fishing privileges, the river is defined as the main channel and immediate side or secondary channels or chutes. It does not include oxbow or floodplain lakes, or backwaters that extend onto the floodplain or up tributaries when the Mississippi River level exceeds 33 feet at the Cairo, Ill., gauging station. Similarly, any person possessing a valid Missouri sport fishing permit, or who is legally exempted from those permit requirements, without additional permit or license, will have these same fishing privileges on the Mississippi River within the boundary of Kentucky. Both states' anglers must abide by the regulations of the state in whose waters they are fishing and, when fishing in waters in which they are not licensed to fish, shall comply with the most restrictive of the two states' regulations.

Black Bass on the Elk River. The daily limit is two black bass on the Elk River. On the Elk River, all black bass less than 15 inches in total length must be returned to the water unharmed immediately after being caught.

Smallmouth bass on the Big River. The black bass special management area on the Big River is expanded upstream to Leadwood Access in St. Francois County. From Leadwood Access downstream to the Maramec River, there is a 15-inch minimum length limit on smallmouth bass, and the daily possession limit of 12 black bass, which may include no more than six largemouth and smallmouth bass in the aggregate, may include only one smallmouth bass.

Flathead Catfish on Longview Lake. The daily limit is reduced to one flathead catfish, and flathead catfish less than 24 inches in total length must be returned to the water unharmed immediately after being caught.

Rock Bass (goggle-eye) and Warmouth. All rock bass less than 8 inches in total length must be returned to the water unharmed immediately after being caught on the Big Piney River from Highway 17 bridge (in Texas County) to its confluence with the Gasconade River. The daily limit for rock bass on the entire Big Piney River will return to the statewide daily limit of 15 fish.

Snagging and grabbing. The James River from Lake Springfield Dam to the Highway 160 bridge is opened to snagging, snaring and grabbing, and the harvest and possession of paddlefish will now be permitted on this portion of the river.

Hellbenders. Due to drastic declines in hellbender numbers in recent years, both the Ozark and eastern hellbender have been added to the state endangered species list. Hellbenders cannot be taken or possessed. Hellbenders caught on hook and line must be returned unharmed immediately to the water. It is unlawful to gig or otherwise harm hellbenders.



DON'T LEAVE QUAIL DE-FENCE-LESS

Quail love weedy fences, but they'll abandon fence lines that become overgrown with small trees. To keep quail around:

- Cut down small and undesirable trees in 50-foot sections 200 feet apart.
- Don't cut and stack trees in brush piles. Let them lie where they fall.
- Treat undesirable tree stumps with herbicides to prevent regrowth.
- Kill dense, turf-forming grasses in the fence line with herbicide.

For more information about creating quail habitat, request the free publication, "On the Edge," from the Distribution Center, Missouri Department of Conservation, P.O. Box 180, Jefferson City, MO 65102-0180. To get advice tailored to your property, contact a private land conservationist at your local Conservation Department office.

March madness returns to trout parks

Each year on March 1, tens of thousands of Missourians enjoy the catch-and-keep season opener at the state's four trout parks. Some come to fish, others to watch the spectacle. All share the opportunity

to shake off cabin fever and enjoy the outdoors in some of the Show-Me State's most scenic settings.

The Conservation Department provides fish for trout parks, but the parks themselves are owned and operated by other agencies. For information about Bennett Spring State Park near Lebanon, Montauk State Park near Licking and Roaring River State Park near Cassville, call the Missouri Department of Natural Resources toll-free information line, 800/334-6946 or visit www.mostatateparks.com. For information about Maramec Spring Park, call the James Foundation at 573/265-7387 or visit www.missouritrout.com/maramec.html.

Year 2004 fishing permits are available now. If you don't already have one, buying ahead of time will save time at trout parks on opening day.



Vulture Venture is back!

Since 1996, the Shepherd of the Hills Fish Hatchery in Branson has hosted Vulture Venture, one of Missouri's most unusual wildlife viewing opportunities.

The event is an opportunity to learn about these often misunderstood birds of prey. This year's event will be held Feb. 28 from noon to 6 p.m. and will feature both indoor and outdoor activities. Indoor attractions include a live vulture from the Wonders of Wildlife Museum in Springfield, a video about vultures, vulture games, stickers and crafts. Naturalists will be on hand, and spotting scopes will be available for viewing one of Missouri's largest vulture wintering roosts.

This is a rare opportunity to see both black and turkey vultures in the same location. Late in the afternoon, you will be treated to vulture "kettling" as the big birds swoop down to roost for the night. This is a free program and requires no reservations. For more information or directions, call 417/334-4865, ext 0.



COMING SOON TO YOUR MAILBOX: *Community Forestry Questionnaire*

In early March, the Conservation Department will ask citizens in 44 Missouri towns to help manage and improve the publicly owned trees in parks and along streets.

The Community Forestry Program provides tree improvement training and grants to cities and towns throughout the state. To run the program effectively, the Department needs to know what Missourians want from their trees. If you receive the questionnaire "Trees in Your Town," please take a few minutes to fill it in. Return postage is pre-paid, and all answers are voluntary and confidential. If you have any questions, call Justine Gartner at 573/522-4115, ext. 3117, or e-mail at Forestry.Survey@mdc.mo.gov.

RV show joins Lewis & Clark mania

Re-enactors in period garb will be on hand at the 27th annual St. Louis RV Camping and Travel Show Feb. 19-22 at the America's Center in St. Louis.

In observance of the 200th anniversary of the Corps of Discovery's journey through the area, the RV show also will feature a circa 1804 encampment, a 40-foot pirogue, seminars on following the Lewis and Clark Trail, and a Lewis and Clark gift shop. You will also find hundreds of recreational vehicles and vendors showcasing campgrounds, resorts, camping equipment, RV accessories and other products. Add activities like miniature car racing, a laser shooting game, ballooning, clowns and a collection of snakes from the St. Louis Herpetological Society, and you have the makings of a great day. For more information, visit <www.stlouisrvshow.com> or call 314/355-1236.

Youth Deer Hunts POPULAR WITH KIDS

Nevan Woehr, with his 15-point buck, and his brother Nathaniel, with his 4-pointer, were among the 9,054 young hunters who bagged deer during the youth segment of the 2003 firearms deer season.

The two-day, youth-hunting segment of the firearms deer season was established in 2001 to allow youngsters an opportunity to experience hunting under adult supervision without the competition and distraction of the nearly half a million hunters who head into the woods during the regular firearms deer season.

The youth season has proven popular. The harvest has increased by approximately 20 percent each year, and no hunting accidents have been reported. The number of deer taken is still less than 5 percent of the total number of deer harvested during Missouri's deer seasons.

Nevan and Nathaniel, guided by their uncle, Kevin Fincher, were hunting on the farm of Ambrose and Helen Grellner, their grandparents. At about 7:15 a.m., Nov. 2, they walked over a ridge and spotted three deer—two bucks and a doe.

Nevan set up for the first shot and hit the larger buck. The smaller buck ran in a circle and stopped, giving Nathaniel an opportunity to shoot him about 30 seconds later. Each deer fell to a single shot.

Lori and Larry Woehr, the parents of the two young hunters, said Nevan and Nathaniel can't stop talking about their great hunt, and both are looking forward to becoming Hunter Education Certified this summer.



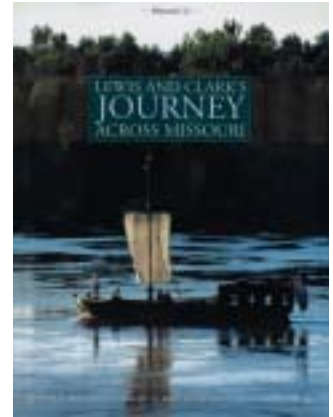
Nevan Woehr, 10, and Nathaniel Woehr, 11, of Rich Fountain, proudly pose with their trophies at a hunter's check station after shooting deer during the youth segment of the 2003 firearms deer season. The brothers were rewarded with commemorative hats by their uncle and deer hunting guide.

Lewis and Clark commemorative book available

Conservation Department Nature Shops are offering a bicentennial commemorative book describing the travels of Lewis and Clark through Missouri.

The 120-page, full color "Lewis & Clark's Journey Across Missouri," compiles the seven-part series on Lewis and Clark originally published in *Missouri Life* magazine. It also includes a chapter on the plants and animals the explorers encountered in Missouri. The book features the wildlife art of John James Audubon from the collection of the Missouri Historical Society.

You can purchase "Lewis & Clark's Journey Across Missouri" from Conservation Nature Centers in Blue Springs, Kirkwood and Jefferson City or by calling the Nature Shop, toll-free, at 877-521-8632. The book costs \$24.95 plus \$1.55 sales tax, where applicable, and \$5.95 for shipping and handling.



Missouri River Conference set for May 23-26

The Missouri River Natural Resources Committee and the U.S. Geological Survey will hold the eighth annual Missouri River Natural Resources Conference May 23-26 in Columbia.

The conference theme is "Rediscovering the Missouri River: Opportunities for Connections." The event provides a forum for all stakeholders to pursue cooperative approaches to river management. Hands-on workshops will explore the connection between research and citizens and the use of independent science review to resolve management problems. Other events include the presentation of papers, a poster session, exhibits, river field trips and a fish fry on a Missouri River sandbar. Registration information is available from Jeanne Heuser, 573/876-1876, <jeanne_heuser@usgs.gov>.



Outdoor Calendar

HUNTING	OPEN	CLOSE
Coyotes	5/12/03	3/31/04
Deer, Archery	10/1/04	to be announced
Deer, Firearms	11/13/04	to be announced
Squirrels	5/22/04	2/15/05
Rabbits	10/1/03	2/15/04
Crows	11/1/03	3/3/04
Turkey (spring)	4/19/04	5/9/04
Turkey (Youth Resident)	4/10/04	4/11/04

FISHING

Black Bass (most southern streams)	5/24/03	2/29/04
Trout Parks	3/1/04	10/31/04
catch and release (Fri.–Sun.)	11/14/03	2/8/04
Bullfrog & Green Frog	Sunset 6/30/04	Midnight 10/31/04
Nongame Fish Snagging	3/15/04	5/15/04
Paddlefish	3/15/04	4/30/04

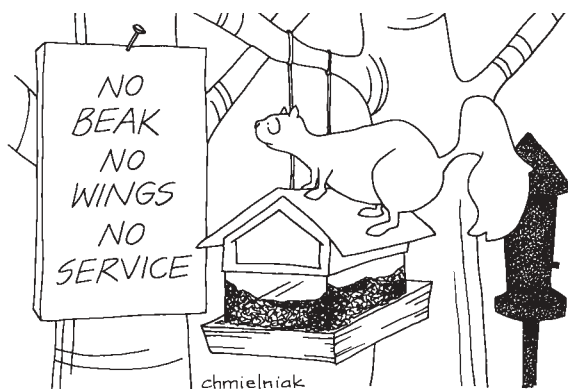
TRAPPING

Beaver	11/20/03	3/31/04
Coyote	11/20/03	2/20/04
Otters & Muskrats	11/20/03	Varies

see regulations for otter zones, limits and dates

For complete information about seasons, limits, methods and restrictions, consult the *Wildlife Code* and the current summaries of *Missouri Hunting and Trapping Regulations* and *Missouri Fishing Regulations*, the *Fall Deer and Turkey Hunting Information*, *Waterfowl Hunting Digest* and the *Migratory Bird Digest*. To find this information on our Web site go to <http://www.conservation.state.mo.us/regs/>.

The Conservation Department's computerized point-of-sale system allows you to purchase or replace your permits through local vendors or by phone. The toll-free number is 800/392-4115. Allow 10 days for delivery of telephone purchases. To purchase permits online go to <http://www.wildlifelicense.com/mo/>.



Teachers and Youth Leaders!

See the schedule for this year's Conservation Education Workshops on the Conservation Department web site. Go to:

www.missouriconservation.org/teacher/workshops/workshops.html

Register today for hands-on conservation activities, career advancement, and exciting new ways to teach!

AGENT NOTEBOOK

Caught in the (Good) Act

Much of our job as Conservation Agents involves enforcing the Wildlife Code and state laws. We apprehend those who are abusing our resources or are in some other way doing something wrong, but our job also gives us many opportunities to catch people doing something right.

I once saw a veteran hunter help an obviously inexperienced hunter field-dress his deer at a check station and then hauled the deer to a processor so that the new hunter wouldn't risk getting blood stains on the inside of his S.U.V. The helpful hunter didn't know the other hunter, but saw an opportunity to make another person's outdoor experience better.

I caught him in the (good) act.

Once, when another agent and I were checking stream anglers, we watched a man quit fishing, go back to his truck and return with a garbage bag. He spent the next 30 minutes picking up cans, bottles, diapers, fast food wrappings and other trash. Until we thanked him later, the man hadn't known we were around. We just happened to catch him in the (good) act.

Most people obey our laws and don't do the wrong thing, but how much better would it be if more people went out of their way to do the "right" thing. The rewards for doing right in the outdoors mostly come from within. However, it's nice for everybody on those occasions when you get caught in the (good) act. —Mark Haviland





Program Schedule

Television the way Nature intended!

Broadcast Stations

Cape Girardeau UPN "The Beat" WQTV / Saturdays 8:30 a.m.

Columbia KOMU (Ch 8 NBC) / Sundays 11:00 a.m.

Hannibal KHQA (Ch 7 CBS) / Weekends, check local listing for times

Joplin KOZJ (Ch 26 PBS) / Saturdays 2:00 p.m.

Kansas City KCPT (Ch 19 PBS) / Sundays 7:00 a.m.

Kirkville KTVO (Ch 3 ABC) / Saturdays 5:00 a.m.

St. Joseph KQTV (Ch 2 ABC) / Weekends, check local listings for times

St. Louis KSDK (Ch 5 NBC) / Sundays, 4:30 a.m.

Springfield KOZK (Ch 21 PBS) / Saturdays 2:00 p.m.

Warrensburg KMOS (Ch 6 PBS) / Sundays 6:30 p.m.

Cable Stations

Branson Vacation Channel / Fri., Sat. 8:00 p.m.

Brentwood Brentwood City TV, BTV-10 / Daily, 4:00 a.m. & 5:00 p.m.

Cape Girardeau Charter Cable Ed. Ch. 23 / Thursdays 6:00 p.m.

Chillicothe Time Warner Cable Channel 6 / Thursdays 7:00 p.m.

Hillsboro JCTV / Mondays 12 p.m. & 6 p.m.

Independence City 7 / Thurs. 2 p.m., Sat. 10 a.m. & Sundays 8 p.m.

Joplin KGCS-Ch 57 / Sundays 6 p.m.

Mexico Mex-TV / Fridays 6:30 p.m. & Saturdays 6:30 p.m. & Sunday 6:30 p.m.

Noel TTV / Fridays 4:30 p.m.

O'Fallon City of O'Fallon Cable / Wednesdays 6:30 p.m.

Parkville City of Parkville / First and third Tuesdays of the month 6:30 p.m.

Perryville PVTV / Mondays 6:00 p.m.

Poplar Bluff City Cable Ch 2 / Tuesdays 7:30 p.m. & Saturdays 10:00 a.m.

Raymore Govt. Access-Channel 7 / Various, check local listings for times

Raytown City of Raytown Cable / Wed. 10:00 a.m. & Saturdays 8:00 p.m.

St. Charles City of St. Charles-Ch 20 / Tues. 5:00 p.m. and Wed. 10:00 a.m.

St. Louis Charter Communications / Saturdays 10:30 a.m.

St. Louis City TV 10 / Mondays 11:30 a.m., Wednesdays 3:30 p.m.

St. Louis Cooperating School Districts / Wednesdays 9 a.m.

St. Louis DHTV-21 / Mondays 10:30 a.m.

St. Louis KPTN-LP/TV58 / Thursdays 10:00 a.m.

St. Peters City of St. Peters Cable / Various, check local listings for times

Ste. Genevieve Public TV / Fridays 1 p.m., 6 p.m. & 12 midnight

Springfield KBLE36 / Nine times a week, check local listing for times

Sullivan Fidelity Cable-Channel 6 / Wed. 11:00 a.m. and Fri. 7:00 p.m.

Union TRC-TV7 / Tuesdays 3:00 p.m.

West Plains OCTV / Mondays 6:30 p.m.

Meet our Contributors



Kathy Love, a writer/editor for the Conservation Department, first saw prairie chickens booming a year ago. "These birds' existence is tenuous, at best," she said. "But the more people know about them, the better their chances for survival. I'd like to see them become an economic asset to North Missouri through nature tourism."

Tom Meister has worked for the Conservation Department for 12 years, as a Volunteer Naturalist, Naturalist, Interpretive Programs Supervisor and currently Wildlife Damage Biologist, helping Missourians who are experiencing conflicts with wildlife. He lives on the Bourbeuse River where he enjoys fishing, canoeing and exploring our state's awesome natural resources.



Fisheries Management Biologist **Kevin Meneau** has worked for the Conservation Department since 1986. He developed St. Louis' lake renovation program and guided its Urban Fishing Program for 15 years. Kevin enjoys hiking and fishing with his wife, Susie, and their children, Tamara and Jacob.

Conservation Department private land conservationist **Phil Rockers** works with landowners in Cole, Moniteau and Cooper counties. When he is not assisting landowners with their forest, fish and wildlife management goals, he enjoys hunting, fishing, backpacking, camping and canoeing.



Wendy Sangster has been a wildlife biologist with the Conservation Department since 1997. Her work focuses on resolving conflicts between people and wildlife in urban and suburban areas. She spent several years in Michigan, New York, and Idaho before returning to her hometown of Kansas City to work for the Conservation Department.

David Ulrich is the Wildlife Division's Ozark Unit Chief and a 25-year employee with the Conservation Department. He lives on a 40-acre farm in Moniteau County where he and his wife, Jennifer, raised three sons. He taught his sons to fish on a small pond on the farm. Rabbit hunting with beagles and basset hounds is one of his hobbies.





Cottontail Rabbit

A cottontail rabbit pokes its head out after a heavy snowfall. During periods of heavy snow, cottontails will either tunnel into a thicket or take shelter in a woodchuck's den. — *Jim Rathert*